LAND VIEW

CORPORATE OFFICE • P.O. BOX 475 • 343 N. HWY 24 • RUPERT, IDAHO 83350 • (208) 531-4100 • FAX (208) 531-4069

Mr. Bill Rogers
DEQ Air Quality Program
1410 N. Hilton, Boise, ID 83706

May 9, 2008

Dear Mr. Rogers:

Enclosed is the application for an air emissions permit for Land View, Inc., along with the filing fee for the permit. Also enclosed is a process description and accompanying attachments.

Please let me know if you have any questions regarding this application. Thanks for your assistance in this matter.

Sincerely,

Roy M. Young
President
Land View, Inc.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
04/03/07

Please see instructions on page 2 before filling out the form.

DEQ USE ONLY
Date Received
Project Number
Payment / Fees Included? Yes ☐ No ☐
Check Number

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	Land View Inc.	
2. Facility Name	Minidoka	3. Facility ID No.
4. Brief Project Description - One sentence or less	Produce 10-34-0 in a tranportable reactor at the facility.	

PERMIT APPLICATION TYPE

5. ☐ New Facility ☒ New Source at Existing Facility ☐ Unpermitted Existing Source
☐ Modify Existing Source: Permit No.:_____ Date Issued:_____
☐ Required by Enforcement Action: Case No.:_____

6. ☒ Minor PTC ☐ Major PTC

FORMS INCLUDED

Included	N/A	Forms	DEQ Verify
☒	☐	Form GI – Facility Information	☐
☒	☐	Form EU0 – Emissions Units General	☐
☐	☒	Form EU1 - Industrial Engine Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU2 - Nonmetallic Mineral Processing Plants Please Specify number of forms attached: _____	☐
☐	☒	Form EU3 - Spray Paint Booth Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU4 - Cooling Tower Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU5 – Boiler Information Please Specify number of forms attached: _____	☐
☐	☒	Form HMAP – Hot Mix Asphalt Plant Please Specify number of forms attached: _____	☐
☐	☒	Form CBP - Concrete Batch Plant Please Specify number of forms attached: _____	☐
☐	☒	Form BCE - Baghouses Control Equipment	☐
☐	☒	Form SCE - Scrubbers Control Equipment	☐
☐	☒	Forms EI-CP1 - EI-CP4 - Emissions Inventory– criteria pollutants (Excel workbook, all 4 worksheets)	☐
☒	☐	PP – Plot Plan	☐
☐	☒	Forms MI1 – MI4 – Modeling (Excel workbook, all 4 worksheets)	☐
☐	☒	Form FRA – Federal Regulation Applicability	☐

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/26/07

Please see instructions on page 2 before filling out the form.

All information is required. If information is missing, the application will not be processed.

IDENTIFICATION	
1. Company Name	Land View Inc
2. Facility Name (if different than #1)	Minidoka
3. Facility I.D. No.	
4. Brief Project Description:	Produce 10-34-0 in a transportable reactor at the facility.

FACILITY INFORMATION	
5. Owned/operated by: (√ if applicable)	☐ Federal government ☐ County government ☐ State government ☐ City government
6. Primary Facility Permit Contact Person/Title	Rod Merrigan - Site Manager
7. Telephone Number and Email Address	208-531-4500 rodm@lvf.com
8. Alternate Facility Contact Person/Title	James Smith - Operations Supervisor
9. Telephone Number and Email Address	208-531-4500
10. Address to which permit should be sent	P.O. Box 475
11. City/State/Zip	Rupert, ID 83350
12. Equipment Location Address (if different than #10)	925 North Hwy 24
13. City/State/Zip	Minidoka, ID 83343
14. Is the Equipment Portable?	☒ Yes ☐ No
15. SIC Code(s) and NAISC Code	Primary SIC: Secondary SIC (if any): NAICS: 325311
16. Brief Business Description and Principal Product	Land View produces and distributes fertilizer for the agriculture industry.
17. Identify any adjacent or contiguous facility that this company owns and/or operates	None

PERMIT APPLICATION TYPE	
18. Specify Reason for Application	☐ New Facility ☒ New Source at Existing Facility ☐ Unpermitted Existing Source ☐ Modify Existing Source: Permit No.:_____ Date Issued: _____ ☐ Permit Revision ☐ Required by Enforcement Action: Case No.:_____

CERTIFICATION		
IN ACCORDANCE WITH **IDAPA 58.01.01.123** (RULES FOR THE CONTROL OF AIR POLLUTION IN IDAHO), I CERTIFY BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION IN THE DOCUMENT ARE TRUE, ACCURATE, AND COMPLETE.		
19. Responsible Official's Name/Title	Roy Young - President	
20. RESPONSIBLE OFFICIAL SIGNATURE	Roy Young	Date: 5/8/08
21. ☒ Check here to indicate you would like to review a draft permit prior to final issuance.		

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
Land View Inc.	Minidoka	
Brief Project Description:	Produce 10-34-0 in a transportable reactor at the facility.	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

1. Emissions Unit (EU) Name:	10-34-0 REACTOR
2. EU ID Number:	
3. EU Type:	☒ New Source ☐ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
4. Manufacturer:	PRECISION TANK AND EQUIPMENT COMPANY
5. Model:	NONE
6. Maximum Capacity:	36 TON/HR
7. Date of Construction:	UNKNOWN
8. Date of Modification (if any)	UNKNOWN
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT

10. Control Equipment Name and ID:			
11. Date of Installation:		12. Date of Modification (if any):	
13. Manufacturer and Model Number:			
14. ID(s) of Emission Unit Controlled:			
15. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

18. Actual Operation	50 HR/QUARTER, 200 HRS/YR
19. Maximum Operation	16 TON/HR

REQUESTED LIMITS

20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☒ Operation Hour Limit(s):	50 HRS/QUARTER, 200 HRS/YR
☒ Production Limit(s):	16 TON 10-34-0 PER HOUR
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports
☐ Other:	
21. Rationale for Requesting the Limit(s):	OPERATING TIME AND PRODCUTION RATE NEEDED TO SUPPLY REQUIRED AMOUNT OF PRODUCT

PROCESS DESCRIPTION

Land View Inc. operates a fertilizer manufacturing and distribution facility near Minidoka, ID. The location of the facility in relation to other cities in southern Idaho is shown in Figure 1. Figure 2 shows the location of the facility in relation to the town of Minidoka, Idaho. The facility is in a rural part of Idaho. The land surrounding the facility is used for agriculture and seasonal storage of sugar beets. The facility is bordered on one side by a railroad line and on another side by State Highway 24. The facility plot plan is shown in Figure 3. The 10-34-0 reactor will be located along the railroad tracks at the northeast corner of the facility as shown in Figure 3.

Land View proposes to produce a liquid fertilizer known as 10-34-0 at the Minidoka facility using a transportable reactor system. The reactor is owned and operated by a third party under contract to Land View to produce the liquid fertilizer. The equipment will be operated on Land View's property under the supervision of Land View management.

The 10-34-0 product is produced by reaction anhydrous ammonia with concentrated phosphoric acid, also known as superphosphoric acid. Both reactants are transported to the facility via railcar. The process flow diagram for the reaction process is shown in Figure 4. The reactants are pumped from the railcars to the reactor where the ammonia is absorbed into the phosphoric acid to produce the desired product. This reaction can reach temperatures of approximately 650 ^{o}F. The next step is to quench the reaction by adding water and add ammonia to produce the desire product grade. The product is cooled in a packed cooling tower and then a heat exchanger before being pumped to storage.

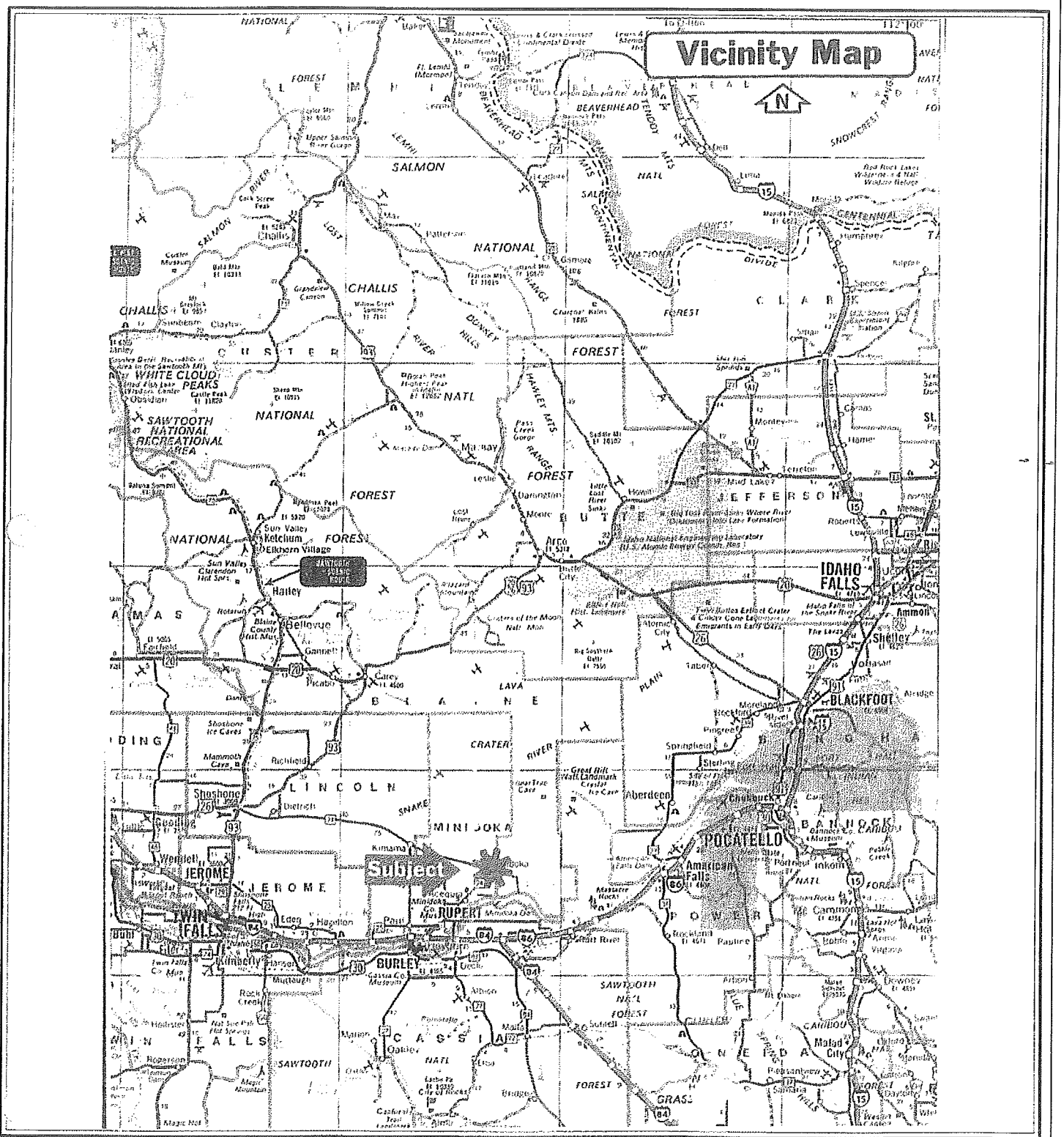
The production rate of the reactor will be 16 tons/hr of finished product (10-34-0). Land View proposes to operate the reactor on a seasonal basis. The production of 10-34-0 will take place once a calendar quarter. The actual operating time will be 50 hours per calendar quarter for a total of 200 hours of operating time per year.

The owner/operator of the transportable reactor is Pacific Northwest Solutions and they have tested the emissions from the reactor. The results of these tests are shown in Table 1. At a production rate of 16 tons/hr, the average ammonia emission rate is 9.9 lb/hr. The annual emissions from the reactor will be 1,980 lb/yr (0.99 ton/yr) of ammonia.

The proximity of the nearest off-site receptors is shown in Figure 5. The prevailing wind at the facility is from the west/southwest. This wind direction would move the plume away from and to the north of the town of Minidoka. Land View will not produce 10-34-0 at any time the beet dump north of the facility is in operation. Dispersion modeling has not been completed, but given the relatively small ammonia emission (9.9 lb/hr and 495

lb/quarter) and the short operating time one could conclude that the ammonia will be readily dispersed in the atmosphere.

Regional Location map



Location map

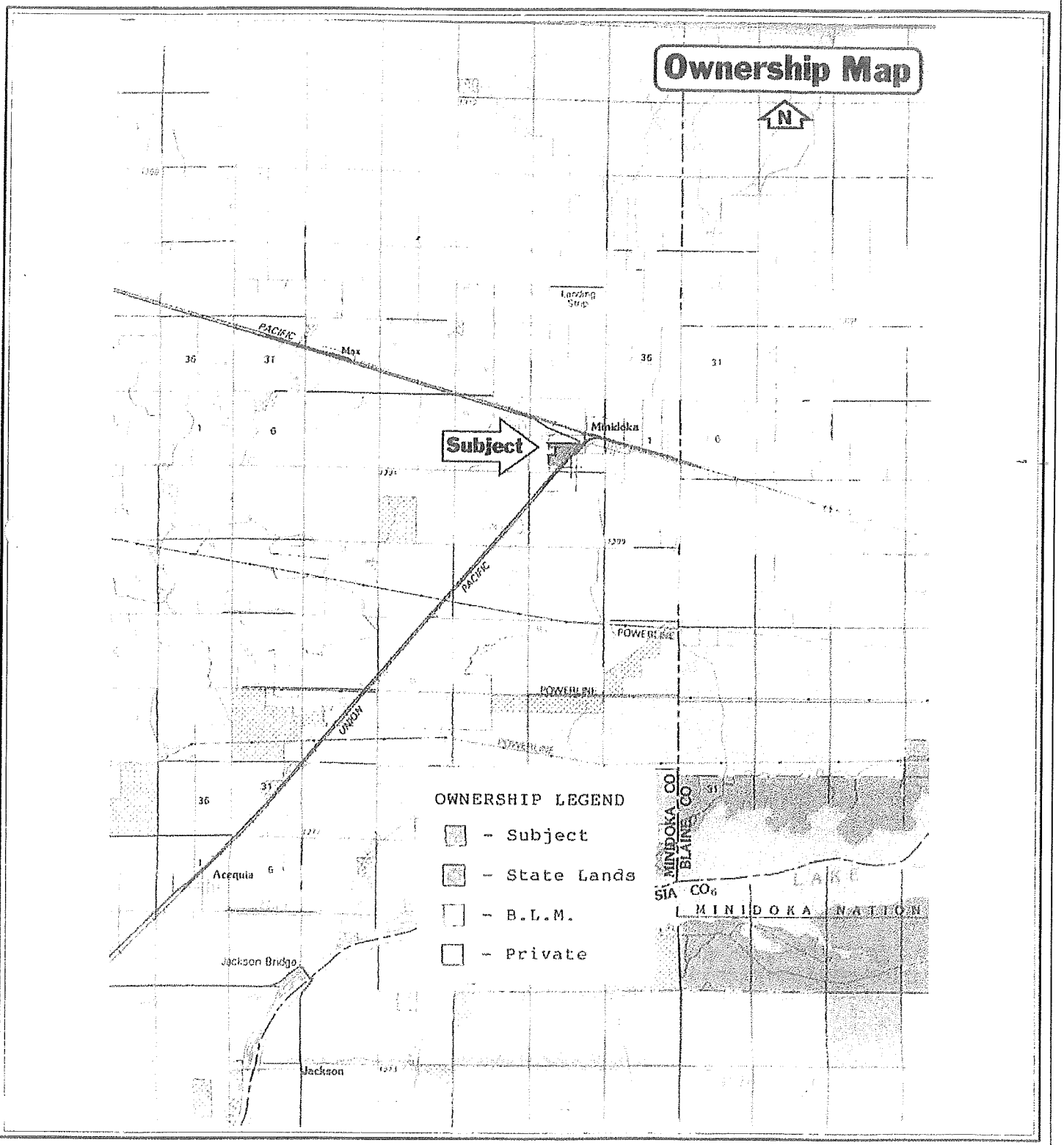


Figure 3

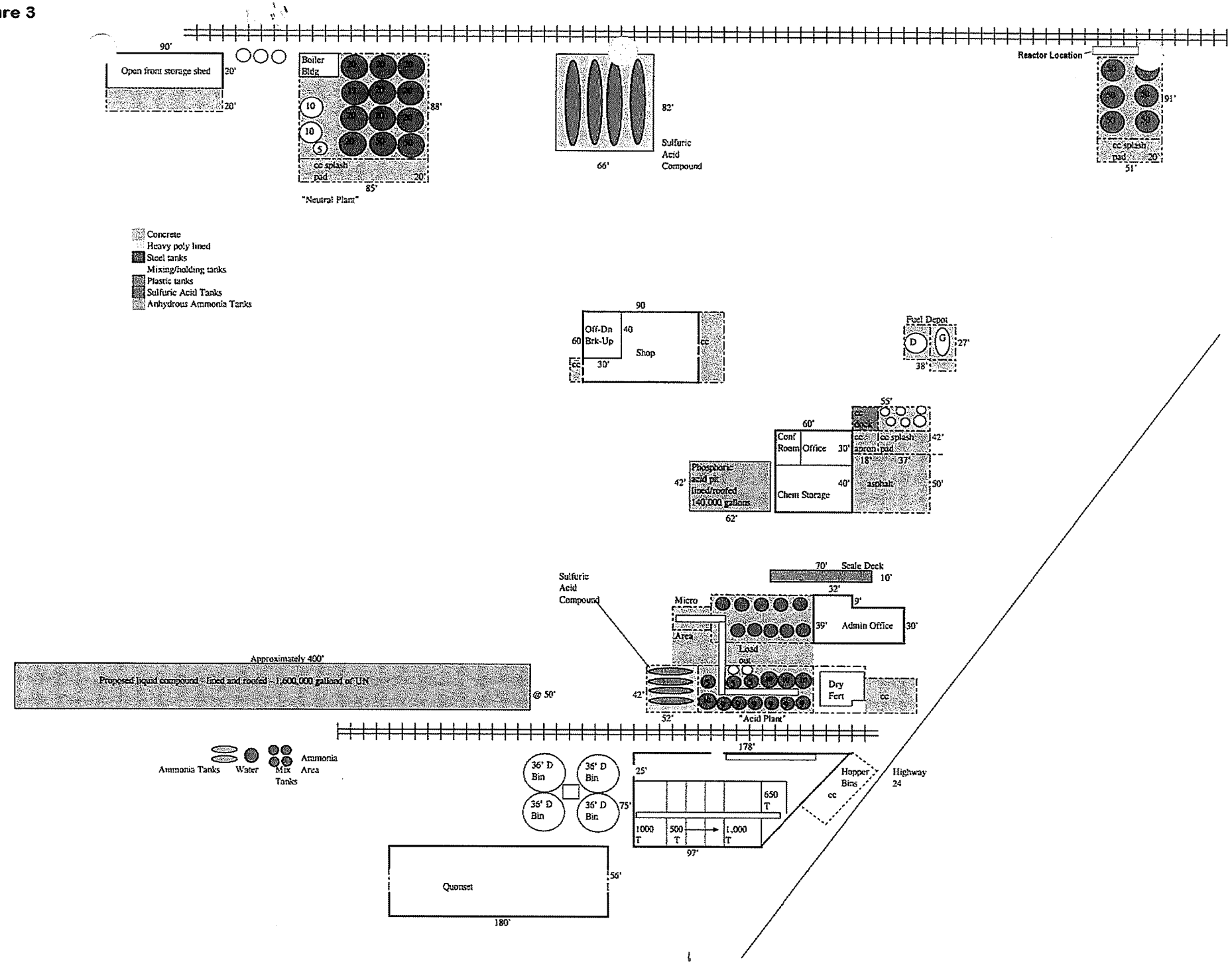
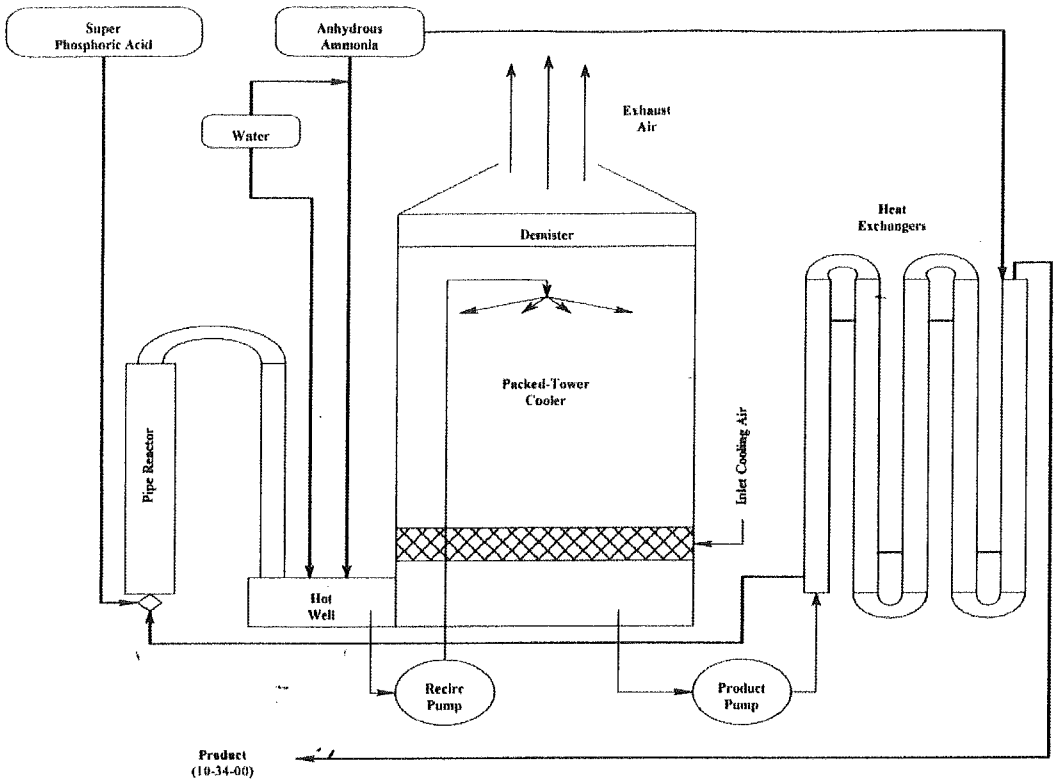
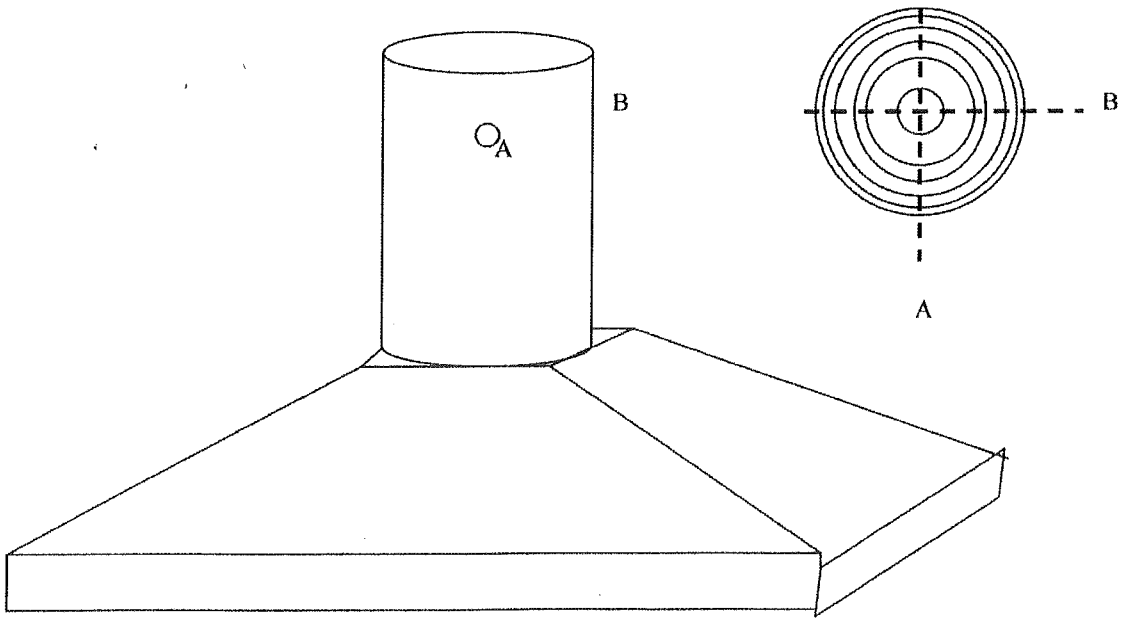

90'
Open front storage shed
20'
20'
Boiler Bldg
88'
10
10
5
cc splash pad
20'
85'
"Neutral Plant"
82'
Sulfuric Acid Compound
66'
Reactor Location
91'
cc splash pad
20'
51'
Concrete
Heavy poly lined
Steel tanks
Mixing/holding tanks
Plastic tanks
Sulfuric Acid Tanks
Anhydrous Ammonia Tanks
90
Off-Dn Brk-Up
40
60
Shop
30'
cc
Fuel Depot
D
G
27'
38'
55'
cc dock
60'
Conf Room
Office
30'
cc
cc splash apron pad
42'
18'
37'
Phosphoric acid pit lined/roofed 140,000 gallons
42'
40'
Chem Storage
asphalt
50'
62'
70'
Scale Deck
10'
32'
Sulfuric Acid Compound
Micro
Area
9'
39'
Admin Office
30'
Load out
Approximately 400'
Proposed liquid compound - lined and roofed - 1,600,000 gallons of UN
@ 50'
42'
Dry Fert
cc
52'
"Acid Plant"
178'
Ammonia Tanks
Water
Mix Tanks
Ammonia Area
36' D Bin
36' D Bin
36' D Bin
36' D Bin
75'
25'
650 T
1000 T
500 T
1,000 T
97'
Hopper Bins
cc
Highway 24
Quonset
56'
180'

Figure 4



Typical 10-34-00 Fertilizer Generator Flowsheet



Temporary Stack Layout and Sampling Locations

Table 1

Company: Pacific Northwst Solutions, Inc.
Stack No.: Tranportable 10-34 Fertilizer Generator
Contact: Richard Underwood, Operations Manager

Location: Glade Facility; Pasco, Wa
Operators: Scott Somers; Id1, Inc.
Date: 11/26/2007

Description	Symbol	Velocity	Ammonia	Flouride	Ammonia	Flouride	Velocity	Ammonia	Flouride	Ammonia	Flouride	Velocity	Averages
Run ID		Vel 1	NH 1	F 1	NH2	F 2	Vel 2	NH 3	F 3	NH4	F 4	Vel 3	
Time		10:45	11:17	12:06	12:53	13:44	14:21	14:45	15:32	16:21	17:05	17:50	
Sample Volume, ft^3	V_m		14.60	14.96	14.97	14.61		14.58	14.56	14.78	14.81		14.73
Corrected Sample Volume, dscf	V_{std}		15.13	15.16	15.17	14.81		14.86	14.59	14.85	14.79		14.92
Average DGM Temp., °F	T_m		50.9	61.3	60.8	60.3		56.3	64.1	62.6	65.5		60.2
Average Stack Temp., °F	T_s		167.5	159.2	154.0	165.2		159.2	166.7	155.5	165.5		161.6
Total Impinger Catch, L	V_{imp}		0.37	0.36	0.37	0.38		0.37	0.40	0.39	0.40		0.38
Volume of Water Vapor, ft^3	$V_{w(std)}$		6.21	5.60	6.02	6.31		5.51	7.15	6.64	6.92		6.30
Moisture Content, %	B_{ws}		0.30	0.27	0.29	0.30		0.27	0.33	0.31	0.32		0.30
Absolute Stack Static Pressure, "Hg	P_s	29.92					29.77					29.59	29.77
Molecular Weight (dry), lb/lb-Mol	M_d	28.00					28.00					28.00	28.00
Molecular Weight (wet), lb/lb-Mol	M_s	25.01					25.01					25.01	25.01
Avg. Stack Gas Velocity, ft/sec	V_s	31.85					34.10					31.97	32.64
Avg. Volumetric Flow Rate, cfm	Q_s	9428					10093					9463	9661
Dry Volumetric Flow Rate, dscfm	Q_{std}	5615					5980					5574	5723
Total Ammonia Mass (Lab), mg	$M_{imp\text{-}NH3}$		420		430			650		600			525
Total Ammonia Mass, mg/sample	M_{NH3}		155.4		157.0			237.3		234.0			195.9
Ammonia Concentration, ppmv	C_{NH3}		493		496			766		756			628
Ammonia Emission Rate, lb/hr	E_{NH3}		7.6		7.7			12.6		11.6			9.9
Total Fluoride Mass (Lab), mg	$M_{imp\text{-}F}$			0.071		0.093			0.072		0.059		0.074
Total Fluoride Mass, mg/sample	M_F			0.025		0.035			0.029		0.023		0.028
Fluoride Concentration, ppmv	C_F			0.08		0.11			0.09		0.07		0.09
Fluoride Emission Rate, lb/hr	E_F			0.001		0.002			0.002		0.001		0.001

Corrected Sample Volume, dscf	V_{std} = [17.71 (^{o}R/"Hg) * Sample Volume (ft^3) * Barometric Pressure ("Hg)]/[Stack Temperature (^{o}F) + 460 (^{o}R)]
Total Impinger Catch, L	V_{imp} = Impinger Catch (mLs) + Rinse (mLs)/1000 (mLs/L)
Volume of Water Vapor, ft^3	$V_{w(std)} = 0.04707 * V_{imp}$
Moisture Content, %	$B_{ws} = V_{w(std)}/[V_m (ft^3) + V_{w(std)}]$
Absolute Stack Static Pressure, "Hg	$P_s = P_b + [SP ("H_2O)/13.6 (g/mL Hg)]$
Molecular Weight (dry), lb/lb-Mol	M_d = 28.00, assumed for non-combustion sources
Molecular Weight (wet), lb/lb-Mol	$M_s = M_d * [1 - B_{ws}] + [18 * B_{ws}]$
Avg. Stack Gas Velocity, ft/sec	V_s = 85.49 ((fps){lb/lb-mol}"Hg}/{(^{o}R)("H_2O)}]$^{1/2}$) * 0.84 * DeltaP^2 * SQRT[T_s (^{o}F) + 460 (^{o}R)]/[P_s * M_s] ; 0.84 Pitot Tube Coeff
Avg. Volumetric Flow Rate, cfm	$Q_s = V_s$ * Stack Area (ft^2) * 60 (sec/min)
Dry Volumetric Flow Rate, dscfm	$Q_{std} = 60 * [1 - B_{ws}] * V_s$ * Stack Area (ft^2) * [528 (^{o}R) / T_s (^{o}F) + 460 (^{o}R)] * [Ps / 29.92 ("Hg)]
Total Ammonia Mass, mg/sample	$M_{NH3} = M_{imp-NH3}$ (mg/sample) * V_{imp}
Ammonia Concentration, ppmv	C_{NH3} = [[M_{NH3} / [V_{std} * 0.02832 (m^3/ft^3)]] * 24.45 (L-mol_{STP})]/18 (g/mol)
Ammonia Emission Rate, lbs/hr	E_{NH3} = [C_{NH3} / V_{std}] * Q_{std} * 60 (min/hr) * 0.0022 (lb/g) / 1000 (mg/g)
Total Fluoride Mass, mg/sample	$M_F = M_{imp-F}$ (mg/sample) * V_{imp}
Fluoride Concentration, ppmv	C_F = [[M_F / [V_{std} * 0.02832 (m^3/ft^3)]] * 24.45 (L-mol_{STP})]/19 (g/mol)
Fluoride Emission Rate, lb/hr	E_F = [C_F / V_{std}] * Q_{std} * 60 (min/hr) * 0.0022 (lb/g) / 1000 (mg/g)

Date June 11, 2007

To: Greg Flibbert
WDOE/Air Quality Programs
N. 4601 Monroe
Spokane, WA 99205-1295

From Scott Somers
Source Tester
2750 Salk Avenue, Suite 102
Richland, WA 99352

Cc Richard Underwood
Pacific Northwest Solutions, Inc.
2430 E. Foster Wells Road, Suite B
Pasco, WA 99302-3140

RE: EMISSIONS TESTING SAMPLING AND ANALYTICAL PLAN, Rev 1.

Summary:
Pacific Northwest Solutions, Inc. (PNS) is requesting permission to conduct a compliance source test of their 10-34-00 fertilizer reactor. The proposed location will be at the Helena Chemical Company, located near the King City/State Highway 395 interchange, outside Pasco, Washington. This source test will be used to assess and re-benchmark emission inventories; and if needed, to refine modeling impacts for this and other sites. The proposed test date is dependent upon WDOE/AQP review and concurrence, and PNS-Helena supply-side railcar delivery. This testing is very similar to the initial testing conducted for AQP in the mid-1990's.

Industrial Process/Operation
This process is a method of producing fertilizer composed of nitrogen and phosphorous. The fertilizer generator is manufactured by Precision Tank and Equipment Company, Athens, IL. Generally the process operates by combining nitrogen (anhydrous ammonia) with phosphorous (superphosphoric acid). The other raw ingredient is water that is used to dilute the product to stable, standard grades of commercial fertilizer. Standard grades manufactured by this process are 10-34-00 and 11-37-00, which equates to a Nitrogen-Phosphorous Pentoxide. This plant will be tested under 10-34-00 generation.

The production procedure is a three-step process. First, ammonia and phosphoric acid reacts in a vertical pipe reactor. Second, reaction products are brought to correct proportions, and lastly, the product is cooled. Within the reactor process temperatures reach 640°F, discharged reactor product is then quenched and brought to the desired grade. Various water and product circulation processes are incorporated to remove latent heat and balance final product prior to transfer to storage. Production rates for this source is ~16-tons/hour, although production rates can be substantially higher, historical emission rate are optimized at this level. Figure 1 represents a general schematic representation of this process and flow paths for 10-34-00 generators.

Source Testing Protocols and Analytes
Emissions testing will occur for fluoride and ammonia. Source testing will adhere to EPA testing criteria (40CFR60, Appendix A) and the Bay Area Air Quality Management Districts (BAAQMD) Manual of Procedures (Volume 4) to the maximum extent feasible. Pollutants will

be sampled from a temporary stack constructed above the cooling tower discharge. All equipment and instruments will be calibrated before and after this source test to ensure appropriate data quality and traceability. Samples will be submitted under chain of custody to DataChem Laboratory (Salt Lake City) for analysis. A complete data package and report will be submitted to WDOE/AQP after testing is finalized.

Description of Evaluation

Test methods, analytical procedures, and calculations used in this testing will be in general accordance with EPA Reference Methods as specified in 40 CFR 60, "Regulations on Standards of Performance for New Stationary Sources, Appendix A" and BAAQMDs method manuals. The measurement and quality control procedures will follow EPA Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, EPA-600/4-77-027b and internal quality assurance plan. All laboratory analytical and quality assurance procedures adhered to standard protocols. The methods utilized are briefly summarized below.

EPA Reference Method 1: Sample and Velocity Traverses for Stationary Sources.
The number and locations of all isokinetic sampling traverse points will be calculated using Reference Method 1 protocols. Like all transportable sources, this generator operates without a permanent stack structure. To accommodate EPA stack sampling guidelines for the extraction of representative samples from effluent sources, a temporary structure will be installed. The structure will allow for at least a two-duct diameter downstream and half-diameter upstream any flow disturbance. This is a circular discharge, measuring 44-inches. Cooling tower emissions leave the 10-34-00 generator via a 84" x 108" demister pad, were it is immediately channeled through a temporary stack assembly making a smooth transition into the exhaust stack. A minimum of 12 traverse points along two 90° opposing traverse lines will be determined by percentage of duct diameter and divided into equal concentric rings and sampling from the near mid-point of these concentric zones. An increased number of traverse points will be added if proper duct ratios (8 downstream and 2 upstream) can not be attained, primarily due to personnel safety factors of sampling from a non-secured stack. Figure 2 represents the configuration and layout of the stack extension and sampling locations.

EPA Reference Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rates.
Stack gas velocities will be determined by the procedures outlined in this method. A Stausschiebe (Type S) pitot tube, meeting the requirements for performance specification, calibration and operation, will be used to measure velocity pressures; these pressure measurements, along with gas density determinations, will compute the stack velocities. Stack gas temperatures will be measured at regular intervals throughout the sampling period using a Type K thermocouple.

EPA Reference Method 4: Determination of Moisture Content in Stack Gases.
Known volumes of gas will be extracted from the stack, and the moisture removed from the sample stream by condensation in impingers and adsorption on silica gel. Moisture determination will be conducted simultaneously with fluoride and ammonia emission measurements. Water gain in the impingers will be measured volumetrically and water absorbed on the silica gel determined gravimetrically. The impingers will be placed within a chilled bath of ice:water over the duration of the sampling runs.

BAAQMD Source Test Procedure ST-1B: Ammonia Integrated Sampling

This method is used to quantify emissions of ammonia. Sample gas is drawn through a solution of 0.1 Normal (0.1N) hydrochloric acid (HCl) that absorbs the ammonia. This method states that stack gases will be withdrawn for the stack via a glass probe, thereafter a short piece of teflon tubing will connect to the sample collection trap. A series of 2 Greenburg-Smith impingers will be filled with 100-mLs of 0.1N HCl, a third impinger will act as a condenser, and the fourth impinger will be filled with silica gel. Sample recovery and cleanup consisted of purging the system with a limited amount of fresh air, determining impinger catch volume and rinsing each impinger with absorbing solution. Absorbing and rinsate solutions will be combined and submitted for analysis. A minimum of three tests will be performed, each lasting 30-minutes at a calibrated flow rate of 0.5 cfm. Placement of sampling point(s) will be determined after traverse points identify flow conditions. It is not expected that stratification exists in this stack profile after the reactor reaches operating conditions.

BAAQMD Source Test Procedure ST-25: Fluoride Integrated Sampling

This method is used to quantify emissions of fluoride. Sample gas is drawn through a solution of 0.1 Normal (0.1N) sodium hydroxide (NaOH) that absorbs the fluoride. This method states that stack gases will be withdrawn for the stack via a glass probe, thereafter a short piece of teflon tubing will connect to the sample collection trap. A series of 2 Greenburg-Smith impingers will be filled with 100-mLs of 0.1N NaOH, a third impinger will act as a condenser, and the fourth impinger will be filled with silica gel. Sample recovery and cleanup consisted of purging the system with a limited amount of fresh air, determining impinger catch volume and rinsing each impinger with absorbing solution. Absorbing and rinsate solutions will be combined and submitted for analysis. A minimum of three tests will be performed, each lasting 30-minutes at a calibrated flow rate of 0.5 cfm. Placement of sampling point(s) will be determined after traverse points identify flow conditions. It is not expected that stratification exists in this stack profile after the reactor reaches operating conditions.

Calibration

All critical and essential measurement and data collection instruments will be pre- and post-calibrated to ensure data quality and traceability. AC&D's quality assurance plan follows the EPA Quality Assurance Handbook for Air Pollution Measurement Systems (EPA/600-4-77) is available upon request. Primary pieces of equipment for calibration include, but not limited to, nozzles, pitot tube, thermocouples, dry gas meter, and orifices.

Laboratory

DataChem Laboratories of Salt Lake City have provided us with responsive and high quality data packages of targeted analytes for many years. The laboratory holds numerous certifications and is used to dealing with analytical requests from all mediums. DataChem has a well established quality assurance plan and auditing procedure to ensure high quality analytical results.

Submission of Final Report and Data Packages

It is expected that the final report will be submitted to Ecology within 3-weeks after all analytical results have been received from the laboratory. The report will include a short narrative of the test procedures and findings, supplemented with process conditions during the time of sampling, testing field notes, field data sheets, calibration and quality control information, analytical data packages, etc.

Figure 5


Amalgamated Sugar Scale house
Potato storage
10-34-0 Reactor site
Minidoka
Nearest house
Image © 2008 DigitalGlobe
© 2008 Tele Atlas
©2007 Google
Pointer 42°45'11.76" N 113°29'49.53" W elev 4280 ft
Streaming 100%
Eye alt 9328 ft